

## PATENT

Atty. Dkt. No. APPM/006382.Y1/DSM/LOW K/JP

## IN THE CLAIMS:

Please cancel claims 26-28, 30, 35-37, 39, 41, and 51-61, and amend claim 47 as follows:

1-45. (Cancelled)

46. (Previously Presented) A method for depositing a silicon carbide layer on a substrate, comprising:

introducing a processing gas comprising an organosilicon compound into a processing chamber containing the substrate therein, wherein the organosilicon compound has the formula  $\text{SiH}_a(\text{CH}_3)_b(\text{C}_6\text{H}_5)_c$ , wherein  $c$  is 2 and  $a+b+c=4$ ; and

reacting the organosilicon compound to deposit the silicon carbide layer on the substrate.

47. (Currently Amended) The method of claim 46, wherein the processing gas further comprises a dopant selected from the group consisting of an ~~oxygen-containing compound, a nitrogen-containing compound, a boron-containing compound, a phosphorus-containing compound, organosiloxane compounds, 1,3,5,7-tetramethylcyclotetrasiloxane (TMCTS), octamethylcyclotetrasiloxane (OMCTS), 1,1,3,3-tetramethyldisiloxane (TMDSO),~~ phosphine ( $\text{PH}_3$ ), borane ( $\text{BH}_3$ ), diborane ( $\text{B}_2\text{H}_6$ ), ~~silazane compounds, trimethylsilane,~~ oxygen ( $\text{O}_2$ ), ozone ( $\text{O}_3$ ), carbon monoxide ( $\text{CO}$ ), carbon dioxide ( $\text{CO}_2$ ), ammonia ( $\text{NH}_3$ ), nitrogen ( $\text{N}_2$ ), and combinations thereof.

48. (Previously Presented) The method of claim 46, wherein the organosilicon compound is selected from the group consisting of diphenylmethylsilane ( $\text{SiH}_1(\text{CH}_3)_1(\text{C}_6\text{H}_5)_2$ ), diphenyldimethylsilane ( $\text{Si}(\text{CH}_3)_2(\text{C}_6\text{H}_5)_2$ ), diphenylsilane ( $\text{SiH}_2(\text{C}_6\text{H}_5)_2$ ), and combinations thereof.

49. (Previously Presented) The method of claim 46, wherein the silicon carbide layer is deposited in a damascene structure as a material layer selected from the group

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consisting of a silicon carbide-containing barrier layer and a silicon carbide-containing etch stop layer.

50. (Previously Presented) The method of claim 46, wherein the silicon carbide layer has a dielectric constant of less than 4.

51-61. (Cancelled)